

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 12 (cancelled)

13. (currently amended) A system for osteosynthesis on the vertebral column for stabilization of vertebrae comprising:

at least one rod-shaped linkage element;

at least two fixation means to be anchored into a vertebra;

each said fixation means having a head in the shape of a fork having two branches, said two branches defining a reception space closely in the form of a U for receiving the at least one rod-shaped linkage element;

said head having a bottom in the shape of a horse saddle;

a blocking screw to be screwed in the reception space to fix the at least one linkage element between the two branches of the fork shaped screw head;

~~said head having a guide means for an independent closure to be fixed on the head after positioning the at least one linkage element in the fork of the head;~~

said independent closure part being in the general shape of a U with branches cooperating with the branches of the fork shaped part of the head;

said closure part having a bottom which comprises a threading for cooperation with the blocking screw; and

said guide means for positioning said closure part on said head, said guide means including undercut portions in external lateral surfaces of the forked shaped part of the head forming arched shoulders provided on the head being formed by an arched shoulder on external lateral surfaces of the fork shaped part of the head.

14. (currently amended) A system for osteosynthesis according to claim 13, further comprising said closure part having a complementary shoulders for said guide means and said closure part being set by flexible spacing or shape memory of said fork branches and said closure part being anchored by contacting transverse surfaces of the shoulders during tightening of the blocking screw.

15. (previously presented) A system for osteosynthesis according to claim 14, wherein the shoulders provided on the lateral surfaces of the fork shaped head part are in the shape of an arc of a circle.

16. (currently amended) A system for osteosynthesis according to claim 14, wherein the shoulders have inclined contact surfaces converging closely towards the threading for receiving the blocking screw.

17. (currently amended) A system for osteosynthesis according to claim 13, wherein on the vertebral column for stabilization of vertebrae comprising:

at least one rod-shaped linkage element;

at least two fixation means to be anchored into a vertebra;

each said fixation means having a head in the shape of a fork having two branches, said two branches defining a reception space closely in the form of a U for receiving the at least one rod-shaped linkage element;

said head having a bottom in the shape of a horse saddle;

a blocking screw to be screwed in the reception space to fix the at least one linkage element between the two branches of the fork shaped screw head;

said head having a guide means for an independent closure part to be fixed on the head after positioning the at least one linkage element in the fork of the head;

said independent closure part being in the general shape of a U with branches cooperating with the branches of the fork shaped part of the head;

said closure part having a bottom which comprises a threading for cooperation with the blocking screw;

said guide means provided on the head being formed by an arched shoulder on external lateral surfaces of the fork shaped part of the head;

    said head is being prolonged by a lower part in the shape of a hook for setting in place a pedicle; and

    said hook comprises comprising a flexible lamina for temporary maintenance.

18. (currently amended) A fixing element to be anchored onto a vertebra for osteosynthesis instrumentation, said fixing element comprising:

    a head in the shape of a fork having two branches, said two branches defining a reception space closely in the form of a U for receiving a linkage element;

    said head having a bottom in the general shape of a horse saddle;

    said head further having guide means for an independent closure part capable of being fixed on the head after said linkage element has been positioned in the fork of the head;

    said closure part being in the general form of a U with branches co-operating with the fork branches;

    said closure part having a bottom which comprises a threading for co-operation with a blocking screw; and

said guide means being formed by an arched shoulder on undercuts in external lateral surfaces of the fork shaped part of the head, said undercuts forming a pair of arched shoulders.

19. (currently amended) A fixing element according to claim 18, wherein the closure has a complementary shoulders and wherein said closure part is set by flexible spacing or shape memory of the fork branches and is anchored by contacting transverse surfaces of the shoulders during tightening of the blocking screw.

20. (previously presented) A fixing element according to claim 19, wherein the shoulders provided on lateral surfaces of the fork shaped part of the head are in the form of an arc of a circle, allowing a degree of freedom for the linkage element relative to a fixation implant on a vertebral column.

21. (currently amended) A fixing element according to claim 19, wherein the shoulders have inclined contact surfaces converging closely on the threading.

22. (currently amended) A fixing element according to claim 18, further to be anchored onto a vertebra for osteosynthesis instrumentation, said fixing element comprising:

a head in the shape of a fork having two branches, said two branches defining a reception space closely in the form of a U for receiving a linkage element;

said head having a bottom in the shape of a horse saddle;

said head further having guide means for an independent closure part capable of being fixed on the head after said linkage element has been positioned in the fork of the head;

said closure part being in the general shape of a U with branches cooperating with the fork branches;

said closure part having a bottom which comprises a threading for cooperation with a blocking screw;

said guide means being formed by an arched shoulder on external lateral surfaces of the fork shaped part of the head;

a lower part in the form of a hook for setting in place on the vertebra; and

said hook comprising a flexible lamina for temporary fixation maintenance.

23 - 24 (cancelled)

25. (new) A system according to claim 13, further comprising said head having a longitudinal axis and said independent closure being movable relative to said head about an axis transverse to said longitudinal axis.

26. (new) A system according to claim 13, wherein said independent closure part branches comprise arms formed from a flexible material and wherein said arms are flexed to set the closure part on the head.

27. (new) A system according to claim 13, wherein said independent closure part branches comprise arms formed from a shape memory material and wherein said closure part is set on the head by subjecting the arms to a temperature which causes the arms to fold back into an anchoring position.

28. (new) A fixing element according to claim 18, wherein said independent closure part branches comprise arms formed from a flexible material and wherein said arms are flexed to set the closure part on the head.

29. (new) A fixing element according to claim 18, wherein said independent closure part branches comprise arms formed from a shape memory material and wherein said closure part is set on the head by subjecting the arms to a temperature which causes the arms to fold back into an anchoring position.

30. (new) A fixing element according to claim 18, wherein the head has a plurality of cut-outs for allowing passage of an instrument.

31. (new) A system according to claim 13, wherein the head has a plurality of cut-outs for allowing passage of an instrument.

32. (new) A system according to claim 13, wherein the shoulders on said head are formed by an arc which is parallel to a longitudinal axis of the head.